to the one month's free programming when they buy USSB's 12 month programming package. PRIMESTAR reportedly indicated in October 1996 that it plans to spend over \$20 million on promotional activities during the remaining months this year, including a renewal of its NASCAR sponsorship. 130

- 45. Over the past year, the trend toward bundling video programming with telecommunications and information services appears to have had an impact on the DBS industry. AT&T acquired a 2.5% interest in DIRECTV from Hughes with an option to increase its holdings by up to 30% during the next five years. AT&T ran a promotion from October 9 through October 14 during which it offered a \$100 rebate on DIRECTV equipment to its long distance customers if they purchased one-year programming subscriptions for \$354. 131 On August 29, 1996, Cincinnati Bell announced agreements to market DIRECTV and USSB services and equipment to its customers. DIRECTV has also entered into an "agency agreement" with RCN, a SMATV operator using the assets that belonged to Liberty Cable to serve approximately 40,000 subscribers in New York City, whereby subscribers in buildings served by RCN can purchase programming from DIRECTV after they purchase a digital decoder box. 133
- 46. "Headend in the Sky" Service -- Providing Digital Direct Broadcast Service to MVPDs. Last year the Commission reported that TCI proposed to offer a "headend in the sky" ("HITS") service, which involved providing to other MVPDs the same programming feed distributed to PRIMESTAR subscribers. The subscribing MVPDs could then combine HITS service with local broadcast channels and transmit the programming package over the MVPDs' networks to their subscribers, who would use set top boxes to receive the service. The Commission also reported that other DBS operators, such as DIRECTV and EchoStar, suggested that they may also use their DBS facilities to provide service to MVPDs. In October 1996, TCI launched a test of HITS service delivering 80 channels of digital programming in addition

DISH Sales Successful for Dealers, SkyREPORT, July 1996, at 10.

Charles Paikert, *PrimeStar Eyes Image for 4th-Quarter Campaign*, Multichannel News, Oct. 7, 1996, at 44. See also Mitchell & Breznick, *DBS Price Wars*, supra. (TCI, which is the largest PRIMESTAR distributor, reportedly will spend \$8 million on marketing of PRIMESTAR through the end of the year).

Mitchell & Breznick, DBS Price Wars, supra.

Cincinnati Bell, Cincinnati Bell Enters the Home Entertainment Industry with DIRECTV and USSB (press release), DBS Online! Press Release Archives, Aug. 29, 1996, http://www.dbs.digifix.com/DBS/ NewPR/96-08-30_01.html.

Charles Paikert, DirecTv Gets NYC Port, Multichannel News, Oct. 7, 1996, at 12; Alan Breznick, A DBS Shakeup? More Dish Players Enter Corwded Field, Cable World, Oct. 7, 1996, at 1.

¹³⁴ 1995 Report, 11 FCC Rcd at 2087 ¶ 59.

¹³⁵ Id.

to the analog programming that was already available to subscribers at a TCI system in West Hartford, Connecticut. The service is being offered without charge for a few weeks to months before a commercial test is initiated.¹³⁶

- 47. Preemption of Local Zoning Regulations. Section 207 of the 1996 Act directs the Commission to promulgate regulations prohibiting restrictions that "impair a viewer's ability to receive video programming services through devices designed for . . . direct broadcast satellite services." On August 6, 1996, the Commission fulfilled that requirement by adopting regulations that, among other things, prohibit restrictions, including state or local laws and regulations, that impair the "installation, maintenance, or use of" direct broadcast satellite antennas less than one meter in diameter or located in Alaska. 138
- have commented in the past that they have a competitive disadvantage due to the fact that they cannot distribute local broadcast signals, because of technological and copyright law obstacles. They have been working on several possible solutions to those problems, including improved digital compression and spot beam technology that may permit the carriage of a large number of local broadcast channels within the spectrum available on a DBS satellite. With regard to the effect of copyright law on DBS operators' ability to carry local broadcast signals, in July 1996 ASkyB requested a declaratory ruling from the United States Copyright Office that DBS systems may, under the satellite carrier compulsory license, 141 "retransmit the signals of network affiliated television broadcast stations to subscribers who reside within the local market served by those stations. Such a ruling would permit DBS operators to use some of their capacity to provide local broadcast programming in some major markets, which could address what has been identified as a substantial competitive disadvantage faced by DBS MVPDs. The Copyright Office replied:

Fred Dawson, Digital HITS Hartford, Multichannel News, Oct. 21, 1996, at 1, 78.

¹³⁷ 1996 Act, sec. 207.

⁴⁷ C.F.R. § 1.4000(a) (1996); Preemption of Local Zoning Regulations of Satellite Earth Stations, IB Dkt. No. 95-59, Report & Order, Memorandum Opinion & Order and Further Notice of Proposed Rulemaking, 11 FCC Rcd __, FCC 96-328 (Aug. 6, 1996), summarized at 61 Fed. Reg. 46557 (Sept. 4, 1996).

¹³⁹ E.g., 1994 Report, 9 FCC Rcd at 7477 ¶ 69; 1995 Report, 11 FCC Rcd at 2086-87 ¶ 58.

See, e.g., Jim Barthold & Alan Breznick, DBS Zeroes In on Local Broadcast Signals, Cable World, Dec. 9, 1996, at 1, 215.

¹⁴¹ 17 U.S.C. § 119.

Letter from Marilyn Kretsinger, Acting General Counsel, United States Copyright Office, to William S. Reyner, Jr., Esq., Hogan and Hartson (Aug. 15, 1996) ("Copyright Office Letter").

¹⁴³ See, e.g., 1995 Report, 11 FCC Rcd at 2086-87 ¶ 58.

The Office has considered your arguments regarding localized retransmission of network stations, and we would not question the reporting of a network station that was retransmitted locally to subscribers. Such an opinion by the Office is not, of course, a resolution of the substantive rights of copyright owners or users, which, as I note above, must ultimately be determined by the federal courts. I am simply stating that inclusion of locally retransmitted network stations is not subject to challenge by the Copyright Office.¹⁴⁴

It was reported that ASkyB will seek a reduction in copyright fees when the current fee schedule expires on July 1, 1997, and that it will also try to negotiate retransmission agreements with all of the local affiliates whose signals it plans to carry.¹⁴⁵

C. Home Satellite Dishes

- 49. Unlike DBS subscribers, home satellite dish ("HSD") users employ relatively large (4-8 foot) dishes and often purchase programming through program packagers that are licensed by programmers to facilitate subscribers' receipt of their programming transmitted from various C-Band satellites. Because they are typically used to receive programming from satellites at several different orbital locations, most HSDs include motors that permit the receiving dishes to rotate and face the various satellites. HSD owners have access to more than 265 channels of programming placed on C-band satellites by programmers for receipt and distribution by MVPDs, of which 115 channels are scrambled and approximately 150 are unscrambled. HSD owners can watch the unscrambled channels without paying a subscription fee. To receive scrambled channels, however, an HSD owner must purchase an integrated receiver-decoder ("IRD") from an equipment dealer and pay a subscription fee to an HSD programming packager. Nationwide, approximately 30 program packagers offer packages of scrambled channels to HSD owners. Like DBS systems, however, HSD program packagers do not provide local broadcast station signals, which are generally not available on C-Band satellites.
- 50. As the Commission reported last year, it has proven difficult to obtain accurate estimates of the total number of HSD users, which includes: (1) viewers who subscribe to a packaged programming service, which affords them access to most of the same programming provided to subscribers of other MVPDs; (2) viewers who receive satellite programming services illegally without subscribing; and (3) viewers who receive only non-subscription programming. A recent estimate by industry analysts is that there are approximately 4.5 million HSD users

¹⁴⁴ Copyright Office Letter, supra.

¹⁴⁵ Chris McConnell, ASkyB Seeking Copyright Deal, Broadcasting & Cable, Aug. 26, 1996, at 22.

Telephone Conversation on Oct. 15, 1996 between Commission staff and Harry Thibeadeau, Manager of Industry Affairs, SBCA.

¹⁴⁷ SBCA Comments at 4.

overall, which is consistent with many estimates of last year's total, indicating little overall change in the number of HSD users. It is perhaps more illuminating to consider the number of subscribers to package programming services since they are the only C-band subscribers that can receive much of the same programming generally provided to cable subscribers. After reaching a peak of 2,379,900 authorized subscribers in December 1995, HSD package programming subscribership declined to 2,314,900 subscribers at the end of October 1996. Some observers attribute this decline to the growth of DBS services, citing in particular the fact that DBS equipment is substantially less expensive than the typical HSD, and has become much less expensive over the past year.

D. Wireless Cable Systems

1. Multichannel Multipoint Distribution Service

51. Last year the Commission reported a trend among MMDS systems toward the development of digital technology to boost channel capacity. That trend continues this year, with industry participants expressing their belief that digitalization will permit them to be more competitive with incumbent cable systems. Digitalized MMDS systems were authorized by the FCC in July and are just beginning to be deployed, with some predicted to become operational in the first half of 1997. Certain trends reported last year continue, including increasing

¹⁴⁸ Conversation with Harry Thibeadeau, supra.

¹⁴⁹ DTH Subscribers Chart, SkyREPORT, July 1996, at 8.

DTH Subscribers Chart, SkyREPORT, Sept. 1996, at 8; Conversation with Harry Thibeaudeau, supra.

Jim McConville, *C-band Faces Erosion*, Broadcasting & Cable, Aug. 19, 1996, at 64; *Inside Business*, Satellite Bus. News, Sept. 11, 1996, at 3.

¹⁹⁹⁵ Report, 11 FCC Red at 2093 ¶¶ 73-74. MVPDs that use microwave frequencies in the multichannel multipoint distribution service ("MMDS"), multipoint distribution service ("MDS"), and instructional television fixed service ("ITFS") to transmit video programming to subscribers equipped with special rooftop antennas are typically referred to as wireless cable systems. As we have done in past reports, when discussing wireless cable systems that use these services, we herein alternatively refer to them as MMDS systems or wireless cable systems.

See, e.g., Paul Kagan Associates, Inc., Wireless Cable Investor, Sept. 13, 1996, at 1. Wireless cable operators have access to a maximum of 33 channels of 6 MHz and most operators currently use traditional analog transmission technologies. The 33 channels include 20 ITFS channels that are primarily used for educational purposes and are available for wireless cable use only when an ITFS licensee is willing to lease time on its channels on a part-time basis.

See, e.g., BellSouth, BellSouth Buys Rights to Use Wireless Cable Licenses for New Orleans (BLS Investor News), May 29, 1996; Linda Haugsted, PacBell Details Some Wireless Cable Plans, Multichannel News, June 24, 1996, at 67.

subscribership and consolidations.¹⁵⁵ LEC investment in wireless cable, which appeared to be increasing throughout the year, has recently become less certain due to Bell Atlantic's and NYNEX's announcement of the suspension of their agreement with CAI Wireless Systems, Inc. ("CAI").¹⁵⁶

- MMDS Auctions. On March 28, 1996, the Commission completed its auction of 52. authorizations to provide MMDS in 493 Basic Trading Areas ("BTAs"), raising over \$216 million after 181 rounds of bidding. The MMDS auctions were designed to distribute unused spectrum through competitive bidding while protecting the service areas of incumbent MMDS providers within the BTAs. 157 As shown in Appendix D, Table 1, the ten leading bidders, in terms of their total amount bid, were eight publicly held and two privately held wireless cable companies. Interestingly, companies with LEC investment generally paid considerably more in this year's auction than did other MMDS companies, even after taking into account the size of the market and other factors. The top ten bidders made 77% of the total money bids, covering 62% of the available licenses. In addition to being high bidders, CAI, Pacific Telesis Group ("PacTel"). 158 Heartland Wireless Communications, Inc. ("Heartland"), and People's Choice TV Corp. ("PCTV") Gold won many of the licenses for the major population centers. For example, as can be seen in Appendix D, Table 2, these operators won the ten largest BTAs, as ranked by population. Publicly held operators also won 36 of the top 40 markets. Heartland and American Telecasting, Inc. won the most licenses, 93 and 56 respectively, by concentrating primarily on licenses in small population BTAs.
- 53. Subscribership. Between the end of 1994 and the end of 1995, the total number of subscribers to wireless cable systems increased by 41%, from 600,000 to 847,000 subscribers. While this increase exceeded expectations, growth in 1996 has been slower than expected and predictions for the next few years vary greatly. At the beginning of this year, at

¹⁵⁵ 1995 Report, 11 FCC Rcd at 2091-93 ¶¶ 69-72.

¹⁵⁶ Bell Atlantic Inc., Bell Atlantic, NYNEX, CAI Wireless Systems Suspend Business Agreement for One Year (news release), Dec. 13, 1996; Jason Thompson, Details of CAI/Bell Atlantic and NYNEX Agreement Announced, Bus. Wire, Dec. 13, 1996; Mike Mills, Bell Atlantic Drops TV Strategy; Phone Firm, NYNEX Pull Out of CAI Project on High-Quality, Wash. Post, Dec. 14, 1996, at G2; Michael Katz, Bell Atlantic, NYNEX Pull Plug On Wireless Deal, Broadcasting & Cable, Dec. 16, 1996, at 18; Leslie Cauley, Bell Atlantic, NYNEX Plan to Suspend Agreement With CAI Wireless Systems, Wall St. J., Dec. 16, 1996, at B7.

See Amendment of Parts 21 & 74 of the Commission's Rules with Regard to Filing Procedures in the Multipoint Distribution Service and in the Instructional Television Fixed Service and Implementation of Section 309(j) of the Communications Act-Competitive Bidding, MM Docket No. 94-131, Report & Order, 10 FCC Rcd 9589, 9591, recon., Memorandum and Order on Reconsideration, 10 FCC Rcd 13821 (1995). Many of the BTAs auctioned were of areas surrounding the 35-mile protected service areas of authorized or previously proposed MDS and MMDS facilities. Id., 10 FCC Rcd at 9591 ¶ 3.

In this *Report*, we occasionally refer to PacTel subsidiary Pacific Bell ("PacBell") when the later company is referenced in the cited document rather than PacTel.

Paul Kagan Assoc., Inc., Wireless Cable Industry Projections, Wireless Cable Investor, Jan. 31, 1996, at 2.

least one analyst predicted subscriber growth would increase at a rate of more than 50% per year through 1996 and 1997, reaching 3 million subscribers by 1999. WCAI projects that by the year 2000, the wireless cable industry's subscribership will grow to over 4 million. Even if these projections bear out, this level of subscribership still represents only a fraction of the wired cable industry's 62.1 million subscribers served at the end of 1995. 162

- 54. Actual subscriber growth for the first half of 1996, however, has been less than 20%. ¹⁶³ In part, this is because operators planning to deploy digital wireless cable systems chose to delay heavy marketing efforts until the increased channel offerings made possible by digital technology were available. ¹⁶⁴ Between the end of 1994 and the end of 1995, the number of homes capable of receiving a wireless cable operator's signal (commonly referred to as homes seen) rose from 27.3 million to 29.2 million, a 7.% increase. ¹⁶⁵ The growth of subscribership, relative to homes seen, increased the industry's penetration rate from 2.2% at the end of 1994 to 2.7% at the end of 1995. ¹⁶⁶
- 55. Financial Performance. The wireless cable industry's total revenues for 1995 were \$302 million, a 49% increase from 1994. During 1995 the industry's negative cash flow decreased from \$14.2 million in 1994 to \$3.9 million in 1995. One analyst projects that the wireless cable industry will have positive cash flow in 1996. 169

¹⁶⁰ *Id*.

Wireless Cable Assoc. Int'l, Inc. ("WCAI") Comments at 4.

¹⁶² *Infra* App. D, Tbl. 1.

Paul Kagan Assoc., Inc., Wireless Cable Investor, Sept. 13, 1996, at 11 (reporting second quarter subscribership growth for publicly traded wireless cable MSOs of 11.5% and half year growth of 19.6%). WCAI estimates that, as of July 1996, the industry experienced 12.5% growth from its July 1995 estimate of 800,000 subscribers. The WCAI figure is estimated in a different manner than the Kagan figures used in Appendix D, Table 1, which were based on SEC filings. WCAI Comments at 3.

See, e.g., Kent Gibbons, PCTV's Story: Waiting for Digital, Multichannel News, Dec. 9, 1996, at 54; John M. Higgins, Cable Woes No Help for Wireless Stocks, Multichannel News, Dec. 9, 1996, at 186-87.

Paul Kagan Assoc., Inc., The 1995 Wireless Cable Databook 23 (1995).

¹⁶⁶ Id. WCAI estimates that as of July 1996, the industry was comprised of approximately 200 systems serving about 900,000 subscribers. WCAI Comments at 3. One wireless operator, Heartland, reports same-system subscriber growth resulting in penetration levels of 4.5% as of July 1996. Paul Kagan Associates, Inc., Wireless Cable Investor, Sept. 13, 1996, at 11.

Paul Kagan Assoc., Wireless Cable Industry Projections, Wireless Cable Investor, Jan. 31, 1996, at 3.

¹⁶⁸ Id. For a description of cash flow calculations, see *supra* sec. III.B.

¹⁶⁹ *Id*.

- 56. Status of LEC Investment. In the 1995 Report, the Commission reported that Bell Atlantic, NYNEX and PacBell had all invested in wireless cable operations. ¹⁷⁰ In 1996, one new LEC, BellSouth, entered the wireless cable industry. ¹⁷¹ However, late in 1996, Bell Atlantic and NYNEX announced a suspension of their investment in wireless. ¹⁷² Also late in 1996, a proposed acquisition by PacTel of a wireless system in northern California collapsed, although PacTel states it is continuing with plans for a southern California digital wireless system. ¹⁷³
- 57. On May 29, 1996, BellSouth won, in a court-run auction, the MMDS licenses for New Orleans, Louisiana. BellSouth announced its intentions to offer more than 100 digital channels of wireless cable programming in New Orleans by mid-1997.¹⁷⁴ In that auction (in which BellSouth was the sole bidder), BellSouth agreed to pay \$12 million for the rights to 30 analog wireless cable channels.¹⁷⁵ BellSouth has also commenced negotiations with National Wireless Holdings, Inc. to acquire all of its wireless cable assets in the Miami, Florida area.¹⁷⁶ On October 28, 1996, BellSouth announced that it had signed a letter of intent agreeing in principle to acquire Wireless Cable of Atlanta, Inc. ("WC of Atlanta") for stock valued at \$43.5

¹⁷⁰ 1995 Report, 11 FCC Rcd at 2095 ¶ 79.

BellSouth, BellSouth Buys Rights to Use Wireless Cable Licenses for New Orleans, BLS Investor News, May 29, 1996.

Bell Atlantic, Bell Atlantic, NYNEX, CAI Wireless Systems Suspend Business Agreement for One Year (news release), Dec. 13, 1996.

Pacific Telesis had planned to acquire Wireless Holdings, Inc. and Videotron Bay Area, Inc. (both of which are joint ventures between Le Groupe Videotron, Ltee. and Transworld Telecommunications, Inc.). E.g., Transworld Telecommunications, Inc., Pacific Telesis Group Files Arbitration Proceeding Against Transworld Telecommunications, Inc., Le Groupe Videotron Ltee. and Other Parties, Sept. 27, 1996, at 1; Pacific Telesis Calls Off Wireless Cable Deal, Comm. Daily, Nov. 14, 1996, at 6. If the proposed acquisition had occured, it would have provided Pacific Telesis with access to seven million line-of-sight homes in California and nine million total nationwide when combined with the 1995 acquisition of Cross Country Wireless, Inc. Pacific Telesis, New Acquisition Makes Pacific Telesis a Wireless Digital TV Leader, press release, Nov. 29, 1995. These line-of-sight numbers do not include licenses won by Pacific Telesis in the Commission's MDS auction. Cross Country Wireless, Inc.'s rights and licenses cover Orange County and parts of Los Angeles, Riverside and San Bernadino counties. Brad Smith, PacTel Sees Video's Future as Wireless, Broadcasting & Cable, July 8, 1996, at 36. See also, Linda Haugsted, PacBell Details Some Wireless Cable Plans, Multichannel News, June 24, 1996, at 67.

¹⁷⁴ BellSouth, BellSouth Buys Rights to Use Wireless Cable Licenses for New Orleans, BLS Investor News, May 29, 1996.

Kent Gibbons, BellSouth Eyes 'Big Easy' for Digital MMDS Entry, Multichannel News, June 3, 1996, at 53.

National Wireless Holdings, Inc., National Wireless Enters Into Letter Of Intent With BellSouth For Miami Wireless Cable Assets (news release), Sept. 18, 1996.

- million.¹⁷⁷ On November 5, 1996, BellSouth announced that it had spent \$13.3 million to purchase licenses in areas surrounding Atlanta from CS Wireless Systems, Inc. ("CS Wireless")¹⁷⁸ and CAI.¹⁷⁹ The licenses being purchased from WC of Atlanta, CS Wireless, and CAI are expected to allow BellSouth to reach 1.2 million line-of-sight homes in the Atlanta area.¹⁸⁰
- 58. On December 13, 1996, Bell Atlantic, NYNEX and CAI announced a one-year suspension of their 1995 joint business agreement and CAI's option to repurchase Bell Atlantic's and NYNEX' \$100 million investment in CAI securities. The companies also announced the suspension of their plans to jointly launch wireless systems in Hampton Roads, Virginia, and Boston, Massachusetts. 182
- 59. Consolidation. The trend toward consolidation experienced by the non-LEC wireless cable industry in 1995 has continued into 1996. For example, on February 23, 1996, Heartland announced that it had closed five transactions, acquiring wireless cable systems with

BellSouth, BellSouth to Buy Wireless Cable of Atlanta (news release), Oct. 28, 1996.

¹⁷⁸ CS Wireless, formed in February of 1996, is owned 54.2% by CAI, 35% by Heartland, and 10% by the BANX Partnership (co-owned by Bell Atlantic and NYNEX). CAI Wireless Systems, Inc., *CAI and Heartland Close CS Wireless Transactions* (news release), Feb. 23, 1996.

BellSouth, BellSouth Buys North Georgia Wireless Cable Rights From CS Wireless Systems (news release), CAI Wireless Systems, Nov. 5, 1996.

¹⁸⁰ Id.

Bell Atlantic, Bell Atlantic, NYNEX, CAI Wireless Systems Suspend Business Agreement for One Year (news release), Dec. 13, 1996.

¹⁸² Id. Prior to this development, CAI had announced that it had completed construction of a digital wireless cable system which Bell Atlantic was leasing in the Hampton Roads area of Virginia (which includes Norfolk and Virginia Beach) and was near completion of a similar system in Boston, Massachusetts, which was being leased by NYNEX. CAI Wireless Systems, Inc., CAI Wireless Delivers First Digital Wireless Cable Networks in Boston and Hampton Roads, Virginia (news release), Apr. 25, 1996; Kent Gibbons, Bell Atlantic Anxiety Pummels CAI Stock, Multichannel News, Oct. 7, 1996, at 8. Testing had begun on these facilities in preparation for the launch of commercial digital programming services. Id. The Hampton Roads system, which cost \$6 million to build, was expected to start delivering over 100 channels of programming in the first quarter of 1997. Joe Estrella, Bell Atlantic Starts Testing Digital Wireless Cable In VA., Multichannel News, May 27, 1996, at 33. The Boston system, which cost \$12 million to build, has a downtown transmitter and six boosters in the suburbs and was being tested to ensure line-of-sight access to at least 75% of the city's 1.5 million homes. Id. at 37. NYNEX had stated that it intended to launch its digital Boston system in the second quarter of 1997 and would launch in the New York City area three to six months thereafter. Kent Gibbons, Telcos: We're Sticking With MMDS, Multichannel News, Oct. 28, 1996, at 3.

7.6 million combined line-of-sight homes and 59,900 subscribers.¹⁸³ To complete these acquisitions, Heartland issued \$180 million in new common stock and assumed \$20 million in pre-existing debt.

- 60. Simultaneous to the closing of these acquisitions, Heartland and CAI announced the creation of CS Wireless with systems serving 5.7 million line-of-sight homes¹⁸⁴ and 58,400 subscribers as of March 31, 1996.¹⁸⁵ For Heartland, the combined effect of the activity described in the preceding paragraphs resulted in a net increase of one million line-of-sight homes and 38,900 subscribers.¹⁸⁶
- 61. In addition, on July 29, 1996, Wireless One, Inc. acquired TruVision Wireless, Inc., increasing Wireless One's line-of-sight homes by approximately 2 million¹⁸⁷ and subscribers by 15,435 as of April 30, 1996.¹⁸⁸ After this acquisition, Wireless One was operating in 21 markets which had, as of April 30, 1996, 34,100 subscribers out of a total of over 2 million line-of-sight homes (plus licenses to serve 6.37 million additional line-of-sight homes).¹⁸⁹
- 62. Digital Developments. On July 10, 1996, the Commission issued a declaratory ruling which enables wireless cable operators, MMDS and ITFS licensees to increase their channel capacity and service offerings through the use of two digital modulation techniques, Quadrature Amplitude Modulation and Vestigial Sideband. The Commission ruled that these digital modulation techniques could be implemented without causing harmful electromagnetic

Heartland Wireless Communications, Inc., Heartland Closes Announced Acquisitions and Divestitures (news release), Feb. 27, 1996. The systems acquired include: Cablemaxx, Inc., American Wireless Cable Systems, Inc., most of the assets of Fort Worth Wireless Cable T.V. Associates and Wireless Cable TV Associates No. 38, and certain assets of Three Sixty Corp.

¹⁸⁴ CAI Wireless Systems, Inc., CAI and Heartland Close CS Wireless Transactions (news release), Feb. 23, 1996.

¹⁸⁵ CS Wireless Systems, Inc., Form S-1/A 25 (1996).

Heartland Wireless Communications, Inc., Heartland Closes Announced Acquisitions and Divestitures (news release), Feb. 27, 1996.

¹⁸⁷ Wireless One, Inc., Form 8-K, July 29, 1996, at 17.

¹⁸⁸ *Id.* at 17-18.

Paul Kagan Assoc., Inc., Wireless One \$125 Mil. Bond Registration, Wireless Cable Investor, Aug. 5, 1996, at 7.

Request For Declaratory Ruling on the Use of Digital Modulation by Multipoint Distribution Service and Instructional Television Fixed Service Stations, Declaratory Ruling & Order, __ FCC Rcd __, FCC 96-304 at 2 (July 10, 1996), partial recon. pending.

interference to nearby analog or digital stations.¹⁹¹ The wireless cable industry hailed this regulatory development as a significant improvement in the competitive posture of the industry.¹⁹²

- 63. In order for wireless cable operators to provide digital services, subscribers must use specialized digital set-top converters. In May 1996, PCTV and American Telecasting announced the issuance of a joint request for proposals ("RFP") for a purchase of up to 500,000 digital set-top converters. Eight manufacturing companies responded to the RFP. In addition, PacTel has announced plans to launch in 1997 a digital wireless cable service in the Los Angeles and Orange County area, which encompasses four million homes. While PacTel has not disclosed any definite programming plans, it has stated that it will offer approximately 120 channels, including 14 broadcast stations, and 40 channels of near-video-on-demand.
- 64. In addition, since the 1995 Report, several wireless cable operators have begun to test technology which will allow them to use their systems to provide high-speed Internet access and other data services similar to those offered by other MVPDs. In May 1996, CAI began testing Internet access technology in Washington, DC, using technology capable of sending information to users at the rate of ten megabits per second with a normal telephone line used as the return path. In June 1996, CAI demonstrated the transmission of a signal which integrated both digital video (including local broadcasting stations and national cable television programming) and 10 megabit per second Internet access (with a telephony return path). In September 1996, CAI began testing technology which would allow 27 megabits per second Internet access using General Instrument SURFboard modems and a telephony return path. In addition to CAI's efforts, PCTV and American Telecasting have been conducting Internet access trials on American Telecasting's Lakeland, Florida system with the help of Zenith Electronics

¹⁹¹ *Id.* at 15.

WCAI Comments at 5.

People's Choice TV Corp. and American Telecasting, Inc., People's Choice TV and American Telecasting Announce Request for Proposals on Digital Set-Top Boxes (news release), June 26, 1996.

Linda Haugsted, PacBell Details Some Wireless Cable Plans, Multichannel News, June 24, 1996, at 67.

¹⁹⁵ *Id*.

¹⁹⁶ CAI Wireless Systems, Inc., First Wireless Internet Access Product Being Tested in Washington by CAI Wireless Systems (news release), May 23, 1996, at 1.

¹⁹⁷ CAI Wireless Systems, Inc., CAI Wireless System's Rochester Demonstration Proves Viability of Digital Wireless Cable Technology (news release), June 28, 1996, at 1.

¹⁹⁸ CAI Wireless Systems, Inc., CAI Wireless to Launch Wireless Internet Service Using General Instrument's SURFBoard Cable Modems (news release), Sept. 16, 1996, at 1.

Corporation, Conifer Corporation, and Comwave.¹⁹⁹ Recently, the Commission issued developmental authorizations to test two-way Internet access to American Telecasting for Henderson, Nevada, and to PCTV for Phoenix and Tuscon, Arizona.²⁰⁰ In addition, Atlantic Microsystems, Inc., a wholly-owned subsidiary of CAI, received a developmental authorization to develop and test a two-way digital system on two MDS channels in Hartford, Connecticut.²⁰¹

2. Local Multipoint Distribution Service

65. LMDS frequencies are microwave channels in the 28 GHz band that may be used to deliver two-way multichannel video programming as well as voice and data service. As with distribution using MMDS frequencies, LMDS requires that subscribers have a special antenna. The propagation characteristics of the 28 GHz band are such that an LMDS system must operate in multiple "cells" with radii of three to six miles in order to provide service to a metropolitan area that could be covered by a single wireless cable transmitter. With the exception of CellularVision of New York, L.P.'s ("CellularVision") 6,500-subscriber LMDS system in Brooklyn and Queens, New York, 203 LMDS frequencies are not currently used to distribute video programming in the United States. The first fully commercial operation of 28 GHz technology,

People's Choice TV Corp, Wireless Companies Successfully Test High-Capacity Internet Access (news release), June 27, 1996, at 1.

American Telecasting, Inc., Experimental Authorization, File No. 3287-EX-R-96, granted by the Mass Media Bureau Oct. 1, 1996; People's Choice TV Corp., Request to Use Developmental Authorization, File No. 50106-CM-P-97, granted by letter dated Nov. 12, 1996, from Charles E. Dziedzic, Assistant Chief, Video Services Division, Mass Media Bureau.

Atlantic Microsystems, Request to Use Developmental Authorization, File No. 50112-CM-P-57, granted by letter dated Nov. 21, 1996, from Charles E. Dziedzic, Assistant Chief, Video Services Division, Mass Media Bureau, to Gerald Stevens Kittner, Esq. CAI states that this authorization allows it to conduct a market trial of one and two-way voice, video and data services, in addition to video, using its wireless cable facilities in Hartford, Connecticut. CAI Wireless System, Inc., CAI Wireless Systems Receives First FCC Market Trial Approval To Use Wireless Cable Spectrum for Two-Way Services (press release), Dec. 16, 1996.

See In the Matter of Rulemaking to Amend Parts 1, 2, 21, and 25 of the Commission's Rules to Redesignate the 27.5-29.5 GHz Frequency Band, to Reallocate the 29.5-30.0 GHz Frequency Band, to Establish Rules and Policies for Local Multipoint Distribution Service and for Fixed Satellite Services, CC Dkt. No. 92-297, First Report & Order and Fourth Notice of Proposed Rulemaking, ___ FCC Rcd __, FCC 96-311 ¶¶ 14-15 (July 22, 1996), summarized at 61 Fed. Reg. 39425 (July 29, 1996) ("First LMDS Order").

²⁰³ Cellular Vision USA, Inc., Form 10-Q, Aug. 13, 1996, at 7. Subscriber total is as of August 12, 1996.

This operation was authorized by the Commission in 1991 on a waiver basis. Hye Crest Management, Inc. (For License Authorization in the Point-to-Point Microwave Radio Service in 27.5-29.5 GHz Band and Request for Waiver of the Rules), File No. 10380-CF-P-88, Memorandum Opinion & Order, 6 FCC Rcd 332 (1991). Other applications for LMDS service were subsequently frozen by the Commission.

however, was launched in Caracas, Venezuela, in 1994.²⁰⁵ Canada recently issued licenses for 66 major and 127 lesser markets for what are known there as "local multipoint communications systems."²⁰⁶

66. On July 17, 1996, the Commission adopted a frequency band plan that allocated 1000 MHz of spectrum to LMDS and permitted LMDS systems, geostationary and non-geostationary Fixed Satellite Service (FSS) systems, and feeder links for non-geostationary Mobile Satellite Service (NGSO/MSS or Big LEO) systems to operate in the 28 GHz Band. ²⁰⁷ In the same order, the Commission proposed to allocate an additional 300 MHz of spectrum to LMDS at 31.0 - 31.3 GHz in order to provide greater technological flexibility for this nascent industry. ²⁰⁸ The Commission also sought comment on whether incumbent LECs and cable operators should be eligible to bid at auction for a LMDS license in their geographic service area. ²⁰⁹ Service and auction rules relating to LMDS will be established in the near future. ²¹⁰

E. Local Exchange Carriers

1. Introduction

67. The legal and regulatory changes that occurred in the past year as a result of passage of the 1996 Act are likely to have a significant effect on LEC entry into markets for the delivery of video programming. Given the short period of time since the passage of the 1996 Act, however, LEC entry into markets for the delivery of video programming has not changed dramatically. LECs represent a major competitive presence in only a few markets for the delivery of video programming. LECs continue to weigh their options for entry into markets for the delivery of video programming and continue to move toward that entry, by means of the

Fred Dawson, New Wireless Tech Ready to Roll, Multichannel News, Sept. 12, 1994, at 1.

²⁰⁶ Canada Takes the Lead in LMDS Race, Multichannel News, Nov. 11, 1996, at 61.

²⁰⁷ First LMDS Order, FCC Rcd at ¶¶ 2-5.

²⁰⁸ *Id.* ¶ 95.

²⁰⁹ Id. ¶ 105.

FCC News Release, FCC Adopts Final Band Plan For The 28 GHz Frequency Band (CC Docket No. 92-297), Report No. DC 96-65, at 1. The Commission stated that service rules for satellite systems proposing to operate in the 28 GHz band will be addressed in a forthcoming Report and Order.

Local exchange carriers ("LECs") are local telephone companies that operate in local service areas commonly known as local access and transport areas ("LATAs").

technology (MMDS, wireline) and method (cable franchise, MMDS license, open video system) believed to be most appropriate for each company and local market.²¹²

2. Statutory Changes and Commission Action

68. As noted above, the 1996 Act fundamentally changed the statutory framework for LEC entry into markets for the delivery of video programming by repealing the telephone-cable cross-ownership restriction that had generally prohibited a common carrier from providing video programming directly to subscribers in its local telephone service area. Pursuant to Section 302 of the 1996 Act, LECs have four regulatory options for entering video programming delivery markets within their own regions: (1) Title III radio-based systems, such as MMDS; (2) Title II common carriage systems; (3) Title VI cable systems; or (4) new Title VI open video systems ("OVS"). While opening up new avenues for entry, this provision also prohibits: (1) a LEC from acquiring more than a 10% financial or management interest in an existing cable operator providing cable service within the LEC's local telephone service area; (2) a cable operator from acquiring more than a 10% financial or management interest in a LEC providing local telephone service in the cable operator's franchise area; and (3) joint ventures between cable operators and

In the 1994 Report, the Commission noted an increase in LEC video-related activity since the Commission's 1990 Cable Report, spurred by the adoption of the video dialtone ("VDT") framework and technological advances. 1994 Report, 9 FCC Rcd at 7495-505 ¶¶ 103-20. The 1995 Report noted an evolution in formerly optimistic LEC plans for entry into markets for the delivery of video programming, in terms of mode of entry and timing. 1995 Report, 11 FCC Rcd at 2110 ¶ 103. In particular, in the year between the 1994 Report and the 1995 Report, some LECs proceeded with previously-stated VDT plans, while others suspended action on VDT plans in order to review other means of entry, such as MMDS or cable systems. The 1995 Report further noted that previously anticipated large-scale wire-based entry by LECs had not materialized, and that some LECs appeared to be reassessing options for entry into markets for the delivery of video programming. Id. at 2110-11 ¶ 102.

The telephone-cable cross-ownership restriction was enacted as part of the Cable Communications Policy Act of 1984, Pub. L. No. 98-549, § 613(b) (previously codified at 47 U.S.C. § 533(b)). Section 302(b)(1) of the 1996 Act repealed the restriction. 1996 Act sec. 302(b)(1). For a discussion of the former provision, see 1994 Report, 9 FCC Rcd at 7495-7505 ¶ 103-20; 1995 Report, 11 FCC Rcd at 2097-100 ¶ 86-89. See also Telephone Company-Cable Television Cross-Ownership Rules, Sections 63.54-63.58, CC Dkt. No. 87-266, Further Notice of Proposed Rulemaking, First Report & Order, and Second Further Notice of Inquiry, 7 FCC Rcd 300 (1991), aff'd in part and modified in part, Memorandum Opinion & Order on Reconsideration, 7 FCC Rcd 5069, aff'd, National Cable Television Ass'n v. FCC, 33 F.3d 66 (D.C. Cir. 1994); Telephone Company-Cable Television Cross-Ownership Rules, Sections 63.54-63.58, Second Report & Order, Recommendation to Congress, and Second Further Notice of Proposed Rulemaking, CC Dkt. No. 87-266, 7 FCC Rcd 5781 (1992), aff'd, Memorandum Opinion & Order on Reconsideration and Third Notice of Proposed Rulemaking, 10 FCC Rcd 244 (1994); Telephone Company-Cable Television Cross-Ownership Rules, Sections 63.54-63.58, CC Dkt. No. 87-266, Third Report and Order, 10 FCC Rcd 7887 (1995); Telephone Company-Cable Television Cross-Ownership Rules, Sections 63.54-63.58, CC Dkt. No. 87-266, Fourth Report and Order, 11 FCC Rcd 818 (1995).

²¹⁴ 1996 Act sec. 302 (codified at Communications Act § 651, 47 U.S.C. § 571).

LECs in the same market to provide either video programming or telecommunications services in that market, subject to certain exceptions.²¹⁵

69. Section 302 of the 1996 Act and the regulations adopted to establish OVS provide that if a LEC certifies compliance with certain non-discrimination and other requirements established by the Commission, the open video system will be entitled to reduced regulation under Title VI.²¹⁶ An open video system's carriage rates are entitled to a presumption that they are just and reasonable where one or more unaffiliated video programming providers occupy channel capacity on the system at least equal to that of the open video system operator and its affiliates.²¹⁷ Open video systems are subject to the Commission's rules governing must carry, retransmission consent, program access, sports exclusivity, network nonduplication, syndicated exclusivity, and public, educational and governmental ("PEG") access channels.²¹⁸ In addition, while open video systems are exempt from local cable franchise requirements, localities are permitted to assess a fee on an open video system's gross revenues at a rate not exceeding the franchise fee imposed by that locality on the local cable operator.²¹⁹

4. Current and Planned LEC Entry

a. Video Delivery

i. Status of VDT Systems

70. Last year, we reported that 16 applications for permanent, commercial VDT service had been approved by the Commission and two applications were pending before the Commission. None of the permanent, commercial systems were operational at that time. Bell Atlantic's Dover, New Jersey system was constructed and scheduled to begin service shortly after

²¹⁵ 1996 Act sec. 302 (codified at Communications Act § 652, 47 U.S.C. § 572). The exceptions generally deal with small cable systems or LECs or cable systems in rural areas.

of the Telecommunications Act of 1996 (Open Video Systems), CS Docket 96-46, Report & Order and Notice of Proposed Rulemaking, 11 FCC Rcd 14639 (1996); Implementation of Section 302 of the Telecommunications Act of 1996 (Open Video Systems), CS Dkt. No. 96-46, Second Report & Order, __FCC Rcd __, FCC 96-249 (Jun. 3, 1996), ("Second OVS Report & Order") summarized at 61 Fed. Reg. 28698 (Jun. 5, 1996); Implementation of Section 302 of the Telecommunications Act of 1996 (Open Video Systems), CS Dkt. No. 96-46, Third Report & Order and Second Order on Reconsideration, __FCC Rcd ___, FCC 96-334 (Aug. 8, 1996) summarized at 61 Fed. Reg. 43160 (Aug. 21, 1996).

²¹⁷ Second OVS Report & Order, FCC 96-249 ¶¶ 112-28.

²¹⁸ *Id.* ¶¶ 133-204.

²¹⁹ 1996 Act sec. 302 (codified at Communications Act 653(c)(2)(B), 47 U.S.C. 573); Second OVS Report & Order, FCC 96-249 907-22.

the release of the 1995 Report. The remaining systems were either in planning or in early construction stages. We also reported on the status of eight approved VDT trials.²²⁰

71. VDT systems authorized prior to enactment of the 1996 Act had until November 6, 1996, to effect a transition to one of the four statutorily-recognized options for provision of video programming services. ²²¹ No action was required where trials had ended or were scheduled to end before the deadline, ²²² or where the permanent, commercial VDT systems had not begun operation. ²²³ On October 17, 1996, the Commission approved Bell Atlantic's request for certification to operate its VDT system in Dover Township, New Jersey, as an OVS system. ²²⁴ U S West has elected to pursue cable franchises for its former Omaha, Nebraska, VDT trial. ²²⁵ BellSouth has obtained a cable franchise in Chamblee, Georgia, for the area served by its former VDT trial and has filed an election to utilize the cable regulatory option. ²²⁶ Sprint has applied

²²⁰ 1995 Report, 11 FCC Rcd at 2102-05 ¶ 94.

Second OVS Report & Order, FCC 96-249 ¶ 9. The Commission contemplated reasonable extensions of time for authorized VDT systems that made diligent progress toward transitioning to the new regulatory selection. Id. ¶ 12.

Of the eight trials, five had ended or were scheduled to end by the November 6, 1996 deadline.

The five grants for permanent, commercial VDT service to Ameritech had been abandoned in favor of cable franchises. See 1995 Report, 11 FCC Rcd at 2106-07 ¶ 97. None of the remaining 10 approved and 2 pending applications for permanent authority reported last year were operational by November 6, 1996. Thus, no action was required by those LECs.

Bell Atlantic - New Jersey, Inc. (Certification to Operate an Open Video System), 11 FCC Rcd 13249 (CSB 1996) ("Bell Atlantic OVS Certification") Bell Atlantic has also been granted an extension of time to March 1, 1997 to complete its transition from a VDT service to an OVS. Bell Atlantic-New Jersey, Inc. (Extension of Time to March 1, 1997 to Complete Transition to Open Video System), Order, __FCC Rcd ___, DA 96-2009 (CSB Dec. 2, 1996). See also Comments of Bell Atlantic at 5. See infra Section V.B. for details on the effects of the entry of this system. In its comments, Bell Atlantic noted that it was continuing its market trial, scheduled to end during the fourth quarter of 1996, of Asymmetric Digital Subscriber Line ("ADSL") service in Fairfax, Virginia. ADSL is a Video-on-Demand service. Comments of Bell Atlantic at 7-8. Bell Atlantic has since elected to end this trial. Bell Atlantic also announced, simultaneously with the end of the trial, the intention to deploy an advanced switched digital wireline video network in Philadelphia by 1998 and in the rest of the mid-Atlantic area after that. Bell Atlantic Corp., Bell Atlantic Video-on-Demand Effort Begins Commercial Transition; Company Winds Up Market Trial (news release), Oct. 2, 1996; Video-on-Demand Service Is Stopped in Reston, Virginia, Wall Str. J., Oct. 3, 1996, at B4, and Bell Atlantic Ends Video-on-Demand Trial, Comm. Daily, Oct. 4, 1996, at 4.

Letter from Robert H. Jackson, U S West's Executive Director - Federal Regulatory, to Meredith J. Jones, Chief, Cable Services Bureau, Apr. 16, 1996.

BellSouth, Inc., News from the BellSouth Video Front, http://www.bellsouth.com/investor/bellnews/jun96/art1.html (1996); BellSouth Telecommunications, Inc., Implementation of Section 302 of the Telecommunications Act of 1996 (Open Video Systems), Notice of Election and Request for Extension of Time, CS Dkt. No. 96-46 (filed Nov. 6, 1996).

for cable franchises in Wake Forest and Wake County, North Carolina, and has notified the Commission that it will pursue this option for its VDT trials.²²⁷

ii. MMDS

72. In the 1995 Report the Commission noted that Bell Atlantic, NYNEX and PacBell had made significant investments in wireless cable. As noted above, BellSouth entered this domain this year with its acquisitions of licenses for a wireless cable system in New Orleans. However, as also noted above, Bell Atlantic and NYNEX have suspended their wireless cable ventures with CAI. Currently, the only operational MMDS system directly owned by a LEC is the 42,000 subscriber system in Riverside, California owned by PacBell. 230

iii. Cable Franchises

a. In-Region Cable Franchises

73. In the 1995 Report, we reported that a number of LECs had pursued cable franchises in their service areas as a means of providing video services to their customers. The most aggressive of the LECs in this area was and continues to be Ameritech. Ameritech has acquired 27 cable franchises in Illinois, Michigan, Ohio, and Wisconsin, to serve communities

Federal Communications Commission, *Public Notice*, *Cable Services Action (Sprint, Inc.)*, DA 96-1837, Nov. 1, 1996.

¹⁹⁹⁵ Report, 11 FCC Rcd at 2085 ¶ 79. The Bell Atlantic and NYNEX agreement with CAI gave the two LECs warrants for a 45% share of voting stock in CAI. CAI Wireless Systems, Inc., Form 10K, Mar. 31, 1995, at 3. Pursuant to Commission rules, warrants are not attributed unless or until exercised. 47 C.F.R. § 29.912 Note 1(A). If exercised, however, these warrants would constitute controlling shares. Bell Atlantic and NYNEX also had the right to lease the facilities of any CAI MMDS system within their LATAs which became digital. CAI Wireless Systems, Inc., Form 10K, Mar. 31, 1995, at 4.

The New Orleans wireless system is not yet operational. BellSouth has also announced its intent to acquire wireless systems in Miami, Florida, and Atlanta, Georgia. For more details, see sec. II.D.1.

Pacific Telesis Group, Pacific Telesis Acquires Wireless Cable TV Company (news bulletin), Apr. 18, 1995.

with a total population of more than 1.2 million.²³¹ Seventeen of these cable franchises are currently operational.²³²

74. In addition, in the last year, BellSouth has acquired cable franchises in seven areas in the southern United States.²³³ GTE has received five cable franchises, which will pass over 400,000 homes.²³⁴ PacBell has obtained cable franchises for San Jose²³⁵ and the surrounding Santa Clara County in California.²³⁶ SNET has received a state-wide cable franchise in Connecticut, where previously it had applied to provide VDT service.²³⁷ Finally, SBC has received authorization to perform an 18-month cable trial in Richardson, Texas, a suburb of Dallas.²³⁸

These franchises are located in: Glendale Heights, Glen Ellyn, Naperville, and Vernon Hills, Illinois; Clinton Township, Fraser, Garden City, Lincoln Park, Northville, Northville Township, Plymouth, Plymouth, Township, Southgate, Sterling Heights, Troy, Wayne and Canton Township, Michigan; Berea, Columbus, Hilliard, North Olmsted, Perry Township, Riverlea, Upper Arlington, Clinton Township and Worthington, Ohio; and Greendale, Wisconsin. Ameritech Comments at 3; Telephone conversation between Commission staff and George Callard, Ameritech New Media Counsel, Dec. 3, 1996. See also Comm. Daily, Sept. 19 and Oct. 2, 1996.

The seventeen operational cable franchises are: Glendale Heights and Naperville, Illinois; Canton Township, Fraser, Garden City, Lincoln Park, Northville, Northville Township, Plymouth, Plymouth Township, Southgate, Troy and Wayne, Michigan; and Berea, Columbus, North Olmstead and Upper Arlington, Ohio. Telephone conversation between Commission staff and George Callard, Ameritech New Media Counsel, Dec. 3, 1996.

The seven areas are: Chamblee, Georgia, formerly a VDT trial; Gwinnett County, Georgia; Daniel Island, South Carolina; St. John's Community/World Golf Village, near Jacksonville, Florida; Brentwood and Franklin, Tennessee; and Vestavia Hills, Alabama, a suburb of Birmingham. BellSouth, News from the BellSouth Video Front, http://www.bellsouth.com/investor/bellnews/jun96/art1.html (1996); CableFAX Daily, Oct. 3, 1996, at 1. BellSouth is also, according to CableFAX, pursuing a franchise for Nashville, Tennessee. See also Comm. Daily, Dec. 5, 1996.

These franchises include: Clearwater, Florida (where it previously was approved to provide permanent, commercial VDT service); St. Petersburg, Florida; Camarillo, Thousand Oaks, and Ventura County, California. GTE reports that it is already signing up subscribers for the Clearwater, Florida system and plans to pass 95,000 homes in this area. GTE Launches Its First Cable Franchise in Florida, Multichannel News, July 1, 1996, at 2. See also Local and State Actions, Warren's Cable Regulation Monitor, Aug. 26, 1996; Notebook, Television Digest, Sept. 2, 1996, GTE plans to pass 122,000 homes in Thousand Oaks, California. Ameritech Gets 2 More System Approvals, CableFAX, Feb. 8, 1996.

Pacific Bell Video Services lauched its commercial video service initially to 7500 homes in the San Jose area in September, with plans to expand its video reach to 25,000 homes within one year and to a total of 175,000 homes by 2000. Pacific Telesis Corp., Pacific Bell Video Service Launches Commercial Cable TV Service in San Jose (press release), Aug. 30, 1996; Pacific Telesis Corp., San Jose First California City to Get Cable TV Franchise From Pacific Bell Video Services (press release), June 25, 1996.

Local and State Actions, Warren's Cable Regulation Monitor, Aug. 19, 1996.

²³⁷ SNET Gets Statewide Cable Franchise in Connecticut, Comm. Daily, Sept. 26, 1996, at 1.

²³⁸ SBC Comments at 3-4.

b. Out-of-Region Cable Systems

75. We previously reported on out-of-region cable systems owned by LECs.²³⁹ The major development in this area is the acquisition of Continental Cablevision, Inc., the third largest cable MSO with nearly 4.2 million subscribers, by U S West.²⁴⁰ Approximately 280,000 subscribers involved in the transaction were in-region,²⁴¹ and the Commission granted a temporary waiver on October 18, 1996, to U S West so that it could complete the acquisition and subsequently sell these in-region systems.²⁴² These systems are in addition to those, described above, of LECs electing to convert their VDT authorizations to cable franchises.

iv. OVS

76. The Commission has certified three OVS operators. As noted above, on October 17, 1996, Bell Atlantic received approval for its certification to convert its Dover, New Jersey, VDT system to OVS.²⁴³ Bell Atlantic subsequently purchased the division of Futurevision which had been the only operating program package provider on the Dover system, and has begun offering programming on this system using those resources.²⁴⁴ MFS was granted certifications on December 9, 1996, for the operation of OVS systems in Boston and New York, both of which

²³⁹ 1994 Report, 9 FCC Rcd at 7498 ¶ 107 n.305. In particular, we discussed SBC in Montgomery County, Maryland, and Arlington, Virginia, and U S West in the Atlanta, Georgia, area

See Comm. Daily, Nov. 18, 1996 at 3; U S West and Continental Set Terms for \$11.8-Billion Merger, Comm. Daily, Oct. 8, 1996, at 3; John M. Higgins, Continental Settles for Less, Multichannel News, Oct. 14, 1996, at 3; Paul Kagan Associates, Inc., U S West Becomes Country's Third Largest Cable Company, Cable TV Investor, Feb. 29, 1996, at 2-3. The subscriber count is in addition to the 511,000 subscribers on U S West's Atlanta, Georgia system. U S West, Media Group Reports Third-Quarter Operating Cash Flow Increase of 22 Percent (news release), Oct. 17, 1996. U S West is also reportedly interested in acquiring some of Time Warner's systems which serve 12.1 million subscribers. Paul Farhi, Waiting to be Wired, Wash. Post, Nov. 3, 1996, at H1.

²⁴¹ Continental Cablevision *Proxy Statement*, Oct. 11, 1996, at V-11.

U S West, Inc. & Continental Cablevision, Inc. (Petition for Special Relief), CSR-4788-X, Memorandum Opinion & Order, 11 FCC Rcd 13260 (CSB 1996).

²⁴³ Bell Atlantic OVS Certification, 11 FCC Rcd 13249.

Bell Atlantic, Bell Atlantic Now Offering Video Services in Dover Township New Jersey (news release), Nov. 1, 1996.

are being used to provide programming.²⁴⁵ On October 10, 1996, Digital Broadcasting Open Video Systems received approval to offer OVS service in southern California.²⁴⁶

v. Switched Digital Video

77. This year, Bell Atlantic announced plans to upgrade its infrastructure to a switched broadband network in Philadelphia and southeastern Pennsylvania, with eventual service to over 12 million homes and small businesses across the mid-Atlantic region over the next three years.²⁴⁷ NYNEX also recently announced plans for large-scale deployment of switched fiber networks in the Boston and New York areas, with plans to be able eventually to provide video to up to five million subscribers.²⁴⁸

b. Video Programming and Packaging

78. In the 1995 Report, we reported on two LEC joint ventures for video programming and packaging: Tele-TV, comprised of Bell Atlantic, NYNEX, and PacTel; and Americast, comprised of Ameritech, BellSouth, SBC, GTE, and Disney Corporation. Throughout most of the year, it was reported that both companies had made some progress toward providing video programming and packaging services. For instance, Tele-TV had begun to offer an analog-to-digital conversion service, and Americast announced that it would offer a basic national

²⁴⁵ See Metropolitian Fiber Systems/New York, Inc. (Certification to Operate an Open Video System), Consolidated Order, __ FCC Rcd ___, DA 96-2075 (CSB Dec. 9, 1996) (granting the Nov. 27, 1996 applications of MFS/McCourt and MFS of New York for certifications to operate OVS systems in Boston, Massachusetts and the Island of Manhattan, New York, respectively). Previously, on November 6, 1996, MFS had filed similar applications that were denied. Metropolitian Fiber Systems/New York, Inc., Consolidated Order, __ FCC Rcd ___, DA 96-1912 (CSB Nov. 15, 1996).

²⁴⁶ See Public Notice, DA 96-1703 (Oct. 10, 1996). Digital Broadcasting Open Video Systems proposes to use LEC facilities for the transmission of video services.

²⁴⁷ Bell Atlantic, Bell Selects Equipment Supplier for Initial Switched Broadband Network Deployment, M2Presswire, July 15, 1996, at 1996 WL 10348457.

Nynex Selects Next Level Communications for Network Upgrade, Telephone IP News, Nov. 1, 1996 at ___, 1996 WL 11267086; Fred Dawson, Nynex Takes GI's Next Level for Switched Fiber Network, Multichannel News, Oct. 21, 1996 at ___, 1996 WL 13824261; Nynex To Plunge Fiber Deeper Into Neighborhoods Than Ever Before, Broadband Networking News, Oct. 29, 1996 at ___, 1996 WL 8162893.

²⁴⁹ 1995 Report, 11 FCC Rcd at 2109 ¶ 100. Since then SNET has joined Americast. See Americast Video Gets New Partner, Comm. Daily, June 19, 1996, at 3; Phone Group Adds Partner in TV Venture, N. Y. Times, June 19, 1996, at D1.

²⁵⁰ Telephony, Comm. Daily, Sept. 6, 1996, at 7.

package to program packagers sometime in 1996.²⁵¹ Despite this progress, trade press reports began warning in the summer of 1996 that the viability of both ventures was precarious, in part due to the proposed merger of SBC and PacTel.²⁵² Recently, in fact, there have been reports indicating that Tele-TV's business plan is undergoing fundamental changes.²⁵³ Some reports indicate that the venture is being scaled back, and possibly, terminated and the LEC investors are shifting devotion of their resources to entry into markets for long distance services.²⁵⁴ The LEC investors, however, reportedly deny this scenerio and PacTel stated that funding will remain unchanged at \$300 million a year for the next three years.²⁵⁵

5. Conclusion

79. As with the 1995 Report, both the degree and the method of LEC planned entry into video programming services markets remains unclear, but now, as a result of the 1996 Act, LECs have four possible modes of entry. A large, nation-wide competitive presence has not been realized, and no single technology has been chosen for entry into the markets for the delivery of video programming. LECs continue to test various technologies and construct various types of systems for video delivery, and it appears that LECs will use different technologies as each situation warrants. Bell Atlantic was the only LEC to build and begin operating a VDT system before passage of the 1996 Act, and Bell Atlantic and MFS remain the only LECs with operational OVS systems in the nation. The other modes of current LEC entry are via wireless cable and cable franchises. Overall, while LECs may offer MVPD competition in some local markets in 1997, to date, LECs have yet to become a significant competitive presence.

²⁵¹ Competition Conference Notebook, Comm. Daily, Mar. 13, 1996.

See, e.g., Merger Not Likely Between Tele-TV and Americast, Comm. Daily, Jun. 28, 1996, at 3; Baby Bells Push the Pause Button Again on Tele-TV Interactive Unit, Wall St. J., June 7, 1996, at B4; Baby Bells' TV Developers Are on Hold and Frustrated, N.Y. Times, Aug. 5, 1996, at D1.

Kent Gibbons, Telecos Scrap MMDS Plans for Boston, Virginia Launches, Multichannel News, Dec. 16, 1996, at 8.

Leslie Cauley, Bell Atlantic, NYNEX, PacTel to Shut Down Tele-TV, Wall St. J., Dec. 6, 1996, at ___, 1996 WL-WSJ 11808685 (attributing the shift in focus to the suspension by Bell Atlantic and NYNEX of their investment in wireless); David Lieberman, Regional Bells May Disconnect Tele-TV, USA Today, Dec. 9, 1996, at 2B; Mike Mills, Bell Atlantic Group to Trim Project; Interactive TV Effort Takes Back Seat to Partners' Other Interests, Wash. Post, Dec. 7, 1996, at F2.

Tele-TV Partners Stand by Programming Venture, Warren's Cable Reg. Monitor, Dec. 16, 1996, at __, 1996 WL 14976755; Teleo's Tele-TV Venture Remains on Track, For the Moment, Video Tech. News, Dec. 16, 1996, at __, 1996 WL 2194192; Tele-TV Venture Finalising a Business Plan, Computergram Int'l, Dec. 10, 1996, at __, 1996 WL 13467550; Kent Gibbons, Telecos Scrap MMDS Plans for Boston, Virginia Launches, Multichannel News, Dec. 16, 1996, at 8.

F. Satellite Master Antenna Television Systems

- 80. SMATV systems are private cable systems that do not use public rights-of-way, which allows them to operate without being subject to franchise requirements. SMATV systems are defined in the Communications Act as an exception to the definition of a cable system. Historically, SMATV systems generally served commonly-owned multiple dwelling units ("MDUs") such as apartments or condominiums, commercial establishments such as hotels, institutions (i.e., hospitals), or groups of buildings in close proximity such as universities or resort facilities. More recently, some SMATV systems have been using microwave transmissions linked to system headend(s) to serve multiple buildings that are not commonly-owned without using public rights-of-way. The 1996 Act amended that exception by easing the statutory restrictions on SMATV operators, permitting them to use wires to connect separately-owned buildings, provided they do not use public rights-of-way. This may permit significant SMATV system growth in areas where many different residential buildings can be interconnected without crossing public streets.
- 81. Industry estimates place the total number of SMATV residential subscribers as of September 1996 at approximately 1.05 million, an increase of 10.5% over the 950,000 subscribers reported in the 1995 Report.²⁵⁹ The estimated number of SMATV operators serving MDUs had risen to 5200 operators by December 1995,²⁶⁰ an increase of 41% since December 1994 when there were 3700 operators.²⁶¹ Industry analysts attribute this growth to technical improvements

²⁵⁶ See 1995 Report, 11 FCC Rcd at 2110-11 ¶¶ 104-05; Amendment of Part 94 of the Commission's Rules to Permit Private Video Distribution Systems of Video Entertainment Access to the 18 GHz Band, PR Dkt. No. 96-5, Report & Order, 6 FCC Rcd 1270, 1275 (1991) ("18 GHz Order").

²⁵⁷ Communications Act § 602(7)B, 47 U.S.C. §522(7).

¹⁹⁹⁶ Act sec. 301(a)(2) (codified at Communications Act § 602(7)B, 47 U.S.C. § 522 (7)). The exception previously stated that a cable system did not include a facility that serves only subscribers in one or more multiple unit dwellings under common ownership, control, or management, unless such facility or facilities uses any public "right-of-way." The exception now states that a cable system does not include "a facility that serves subscribers without using any public right-of-way." See 1996 Act sec. 301(a)(2) (codified at Communications Act § 602(7)B, 47 U.S.C. § 522 (7)).

See, e.g., infra App. E; Telephone conversation between Commission staff and John Mansell, Senior Analyst, Paul Kagan Associates, Inc., on Nov. 5, 1996.

Paul Kagan Associates, 1995 Network Private Cable Programmer Census, Private Cable Investor, Dec. 31, 1995, at 5.

Paul Kagan Associates, Inc., 1994 Network Private Cable Counts, Private Cable Investor, Dec. 31, 1994, at 3.

which now make it profitable for operators to install SMATV systems in smaller MDUs. ²⁶² The result has been an increase in the overall number of systems, although many of these SMATV systems may serve only single MDUs. Industry reports suggest that SMATV growth is strongest in the South and Southwest, ²⁶³ but is also growing in other regions such as New York City, Boston and Washington. ²⁶⁴ At the same time, the SMATV industry has continued to experience system consolidations. Much of the growth in the larger SMATV operators has come by acquiring smaller operators. ²⁶⁵ In fact, for the first eight months of 1996, the value of mergers and acquisitions has totaled approximately \$65 million as compared with \$75 million for all of 1995. ²⁶⁶

82. Many SMATV operators are installing more technologically advanced plant and equipment, and are moving aggressively with marketing and product innovations. Increasingly, SMATV systems are using 18 GHz microwave facilities to link headends to rooftop antennas and to link buildings, which increases efficiencies.²⁶⁷ While industry analysts have historically noted that many SMATV systems have been competitively hampered by limited channel capacity,²⁶⁸ a recent industry survey found that on average, SMATV operators had added six more channels since last year, raising total average channel capacity to 39.6 channels.²⁶⁹ In addition, some SMATV operators are experimenting with digitalization,²⁷⁰ and other SMATV operators are installing fiber optics to create the type of hybrid fiber coaxial ("HFC") architecture found in the most technically advanced cable systems.²⁷¹ Still other SMATV operators are combining

Telephone conversation between Commission staff and John Mansell, Senior Analyst, and Margot Black of Paul Kagan Associates, Inc., on Nov. 5, 1996.

²⁶³ OpTel Comments at 2; Richard Nelson, *The Big*, Private Cable & Wireless Cable, May 1996, at 9.

²⁶⁴ RCN Comments at 2-3; Paul Kagan Associates, Inc., *NuVisions Cable Expanding in New York*, Private Cable Investor, Jan. 31, 1996, at 7; Paul Kagan Assocs. Inc, *LodgeNet Enters SMATV Market*, Private Cable Investor, Feb. 29, 1996, at 8.

Paul Kagan Associates, Inc., Top Private Cable Operators Chart, Private Cable Investor, Dec. 31, 1996, at 2.

Paul Kagan Associates, Inc., Cable Deal Roundup, Private Cable Investor, Aug. 31, 1996, at 2.

²⁶⁷ 1995 Report, 11 FCC Rcd at 2111 ¶ 105; Bartholdi Comments at 44. The Commission held in 1991 that microwave transmissions do not "use" public rights-of-way. 18 GHz Order, 6 FCC Rcd at 1271 ¶ 10.

Veronis, Suhler & Associates, SMATV Communications Industry Forecast (10th ed., 1996) 147.

Richard Nelson, *The Big*, Private Cable & Wireless Cable, May 1996, at 9-10.

Glenn Martin, Competing for MDUs, Private Cable & Wireless Cable, July 1996, at 42-43. Digital compression increases system capacity to several hundred channels.

Richard Nelson, *supra*. Operators installing fiber optics include Residential Communications Network ("RCN"), OpTel, Inc. ("OpTel") and MultiTechnology Services ("MTS").

technologies to create "hybrid systems," such as DBS/SMATV or MMDS/SMATV systems as part of a "niche market" strategy. For example, Satellite Connection, a national C-Band programming company, has contracted with DIRECTV to provide programming for its 10 channel, all-digital DBS/SMATV system serving a 120 unit RV Park in Hon-Dah, Arizona. As described above, RCN has a venture with DIRECTV to provide programming to subscribers in its MDUs in metropolitan New York. In Melbourne, Florida, Coastal Wireless Cable Television has developed an MMDS/SMATV system to serve the large residential MDU and hotel/motel markets. The system is the serve that the large residential MDU and hotel/motel markets.

83. Increasingly, SMATV operators are also customizing their products and services to suit niche markets and MDU subscribers' needs. For example, many SMATV systems offer programming not available from their community's local franchise cable system, such as sports packages, concerts and other special programming.²⁷⁵ Some SMATV systems have added more advanced electronic features such as "picture-in-picture," "pick-and-pay" (or pay-per-view programming), interactive games and video-on-demand ("VOD") programming as part of their "custom-designed" programming packages for subscribers. Many of these SMATV systems also offer alarm line monitoring and closed circuit security cameras, a feature particularly important to many MDU residents.²⁷⁶ In addition, some of the larger SMATV operators, like OpTel and

Merging Technologies, Private Cable & Wireless Cable, Feb. 1996, at 26.

Paul Kagan Assocs., DIRECTV Unveils Multiple Dwelling Unit Program, Private Cable Investor, Aug. 31, 1996, at 7; Jim McConville, DIRECTV Makes Big Apple Deal, Broadcasting & Cable, Oct. 7, 1996, at 72. The DBS/SMATV arrangement allows DIRECTV to expand its subscriber base into the SMATV market by offering a full package of local and national programming. See DIRECTV, RCN's Liberty Cable to Deliver DirecTV to New York City Multiple Dwelling Unit Market (press release), Oct. 2, 1996, at 1-2; Peter Lambert, DBS Players Pursuing MMDS Distribution, Cable World, Aug. 12, 1996, at 26.

²⁷⁴ Richard Cuellar, Costal Connection, Private Cable & Wireless Cable, Feb. 1996, at 9.

²⁷⁵ 1996 Programming Guide, Private Cable & Wireless Cable, May 1996, at A1-34. The United Nations TV ("UNTV") network was introduced on Liberty's basic programming tier in 1993. UNIV, which is a news format network similar to C-SPAN, is popular among New York City's large international community. See Bartholdi Comments at 17. MST's NuVisions Cable TV in Brooklyn/Queens, NY offers subscribers the "Telebet" service, which allows them to bet on horses races in New York's three major racetracks. See Paul Kagan Assocs., Inc., NuVisions Cable Expanding in New York, Private Cable Investor, Jan. 31, 1996, at 7.

²⁷⁶ Paul Kagan Assocs., Inc., *LodgeNet Enters SMATV Market*, Private Cable Investor, Feb. 29, 1996, at 8; *LodgeNet Home Market Rollout*, Aug. 31, 1996, at 4; OpTel Comments at 2. SMATV operators note that the competing cable operators often do not provide such services. *See* Bartholdi Comments at 15-16; OpTel Comments at 2.

MTS, are also competing with the incumbent LECs to provide local and long distance telephony and Internet access to their SMATV subscribers in MDUs.²⁷⁷

- 84. SMATV Operator Concerns. Several SMATV operators expressed concern that some of the provisions of the 1996 Act may affect the competitiveness of SMATV systems. OpTel raises concerns over potential interpretations of the 1996 Act's revised "effective competition" standard²⁷⁸ OpTel, RCN and Bartholdi raise concerns over the 1996 Act's provision exempting from the uniform rate structure provision cable systems subject to effective competition.²⁷⁹ Both of these provisions are the subject of pending proceedings, thus we decline to address them further in the context of this report.²⁸⁰
- 85. RCN, Bartholdi and WCAI raise concerns over the demarcation point for inside wiring²⁸¹ and the effect of the Commission's inside wiring rules on SMATV operators' competitiveness. The Commission is addressing the issues raised regarding access to inside wiring by competing MVPDs in a separate proceeding.²⁸²

G. Broadcast Television Service

86. Broadcast television service is both a source of video programming and a transmission medium for video programming.²⁸³ The number of commercial and noncommercial

OpTel Comments at 2; Richard Nelson, *The Big*, Private Cable & Wireless Cable, May 1996, at 9-10; Paul Kagan Associates, Inc., *Liberty Growth Curve*, Private Cable Investor, July 31, 1996, at 2; *LodgeNet Enters SMATV Market*, Private Cable Investor, Feb. 29, 1996, at 6.

²⁷⁸ See OpTel Comments at 2-3. 1996 Act sec. 301(b)(3) (codified as Communications Act § 623(l), 47 U.S.C. §543(l)).

²⁷⁹ See OpTel Comments at 3-4; RCN Comments at 8-9; Bartholdi Comments at 18, 29-30. 1996 Act sec. 301(b)(2) (codified as Communications Act §623(d), 47 U.S.C. § 543(d)). RCN, OpTel and Bartholdi note that their lower subscriber prices have been essential in attracting customers, and are concerned that incumbent cable operators will use the new uniform rate exemption to target MDUs where the SMATV operator is negotiating to become the MVPD, with the result of eliminating competition. *Id.*

Implementation of Cable Act Reform Provisions of the Telecommunications Act of 1996, CS Docket No. 96 Order and Notice of Proposed Rulemaking, 11 FCC Red 5937 (1996).

²⁸¹ RCN Comments at 7; Bartholdi Comments at 47, 49; Bartholdi Reply Comments at 2; WCAI Comments at 24-25.

Implementation of the Cable Television Consumer Protection and Competition Act of 1992 (Cable Home Wiring), MM Dkt. No. 92-260, First Order on Reconsideration and Further Notice of Proposed Rulemaking, 11 FCC Rcd 4561 (1996). See also, Telecommunications Services Inside Wiring (Customer Premises Equipment), CS Dkt. No. 95-184, Notice of Proposed Rulemaking, 11 FCC Rcd 2747 (1996).

²⁸³ See 1995 Report, 11 FCC Rcd at 2113-15 ¶¶ 112-115.

television stations increased to 1550 from 1542 over the last year. Although the overall audience for broadcast television programming has declined in the last year, it is still viewed by a large majority of the television audience. During the 1995-1996 television season, the four major networks (i.e., ABC, CBS, Fox, and NBC) accounted for a combined 62% share of prime time viewing among all television households; UPN and WB, the two newest networks, achieved a combined 9% share of prime time viewing. The amount of prime time programming provided by UPN and WB was six hours and five hours, respectively. The most recent data available for households subscribing to cable service indicates that, even in cable homes, programming originating on local broadcast television stations accounted for a combined 61% share of all day viewing in the 1994-95 television season, while non-premium cable networks and pay cable services achieved a combined 50% share of all day viewing. 287

87. Broadcast total advertising revenues reached \$27.9 billion in 1995.²⁸⁸ Advertising revenues for the four major networks alone reached \$12.4 billion in 1995, an increase of 4% over 1994.²⁸⁹ In addition, for the new season which began on September 15, 1996, ABC, CBS, Fox, and NBC received a record \$5.8 billion in pre-season advertiser commitments, despite losing 8% of their prime time viewers last year.²⁹⁰ In comparison, cable programming networks received \$3.7 billion in advertising revenue in 1995, an increase of 14% over 1994.²⁹¹

Federal Communications Commission, *Broadcast Station Totals as of August 31, 1996*, FCC News Release (Sept. 10, 1996); Federal Communications Commission, *Broadcast Station Totals as of August 31 1995*, FCC News Release (Sept. 8, 1995).

People's Choice: Ratings According to Nielsen, Sept. 9-15, Broadcasting & Cable, Sept. 23, 1996, at 32.

²⁸⁶ Closed Captioning and Video Description of Video Programming, MM Dkt. No. 95-176, Report, __ FCC Rcd __ (July 29, 1996). During the 1995-1996 television season, ABC, CBS, and NBC offered 22 hours of weekly prime time programming and Fox offered 15.

National Cable Television Assoc., *Viewing Shares Broadcast Years 1984/1985-1994/1995*, Cable Television Developments, Spring 1996, at 5 (*citing A.C. Nielsen Co. statistics*). Reported audience shares exceed 100% due to multiple set viewing.

Steve McClellan, *Broadcast Advertising Up 3%*, Broadcasting & Cable, Mar. 4, 1996, at 27-28. The Television Bureau of Advertising supplied this data, which is based on information gathered from the Competitive Media Reporting's MediaWatch Service.

²⁸⁹ Id. This figure represents sales for ABC, CBS, Fox, and NBC. This figure does not include UPN or WB, but the Television Bureau of Advertising and Competitive Media Reporting estimate that UPN received \$250 million for advertising in 1995, and that WB received \$65 million.

Paul Farhi, Half a Minute for Half a Million, Wash. Post, Sept. 19, 1996, at F1.

National Cable Television Assoc., Cable Advertising Revenue, Cable Television Developments, Spring 1996, at 9 (citing Paul Kagan Assocs., Inc., Cable TV Advertising, Sept. 25, 1995, at 3).